

TABLE 3. ESTIMATES OF MEAN FECUNDITY (NUMBER OF FEMALE YOUNG PRODUCED PER FEMALE) OF NORTHERN SPOTTED OWLS ON 11 STUDY AREAS IN WASHINGTON, OREGON, AND CALIFORNIA, SUBDIVIDED BY AGE CLASS.

NWC	1985-2008	71	0.088	0.054	94	0.152	0.038	1,108	0.324	0.027
HUP	1992-2008	17	0.000	0.000	25	0.077	0.052	377	0.230	0.033
GDR	1990-2008	69	0.095	0.034	126	0.080	0.024	1,458	0.305	0.030
Averages		11	0.070	0.015	11	0.202	0.042	11	0.330	0.025

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<sup>a</sup> Sample size indicates the number of cases in which we sampled owls in each age class. This is not a sample that was used to calculate means and standard errors. Those estimates were based on the number of years in the survey period. Estimates were determined using a nonparametric approach. Total number of samples by age class was: S1 = 432, S2 = 693, Adult = 10,325.

TABLE 10. ESTIMATES OF MEAN ANNUAL FECUNDITY (NUMBER OF FEMALE YOUNG PRODUCED PER FEMALE) FOR ADULT NORTHERN SPOTTED OWLS IN SIX ECOREGIONS.

Ecoregion	$\bar{x}$	SE	95% CI	
			Lower	Upper
Washington – Douglas-Fir	0.301	0.043	0.217	0.385
Washington – Mixed Conifer	0.553	0.052	0.451	0.655
Oregon Coastal – Douglas-Fir	0.284	0.026	0.233	0.335
Oregon Cascades – Douglas-Fir	0.334	0.032	0.271	0.397
Oregon/California – Mixed-Conifer	0.314	0.019	0.277	0.351
California Coast	0.305	0.030	0.246	0.364

TABLE 12. ESTIMATES OF MODEL-AVERAGED MEAN APPARENT SURVIVAL ( $\varphi$ ) FOR THREE AGE-CLASSES OF NORTHERN SPOTTED OWLS ON 11 STUDY AREAS IN WASHINGTON, OREGON, AND CALIFORNIA.

Study area	Structure on best model <sup>a</sup>	Sex	S1 <sup>b</sup>		S2 <sup>b</sup>		Adult <sup>b</sup>	
			$\hat{\varphi}$	SE	$\hat{\varphi}$	SE	$\hat{\varphi}$	SE
<b>Washington</b>								
CLE	{ $\varphi$ (CP) $p(R)$ }	F	0.794	0.051	0.820	0.023	0.819	0.013
		M	0.795	0.051	0.820	0.023	0.819	0.013
RAI	{ $\varphi$ ((S1=S2, A)+BO) $p(BO+R)$ }	F	0.541	0.181	0.674	0.156	0.841	0.019
		M	0.546	0.181	0.678	0.157	0.844	0.018
OLY	{ $\varphi$ ((S1, S2=A)+s+T) $p(s+t)$ }	F	0.529	0.148	0.786	0.081	0.828	0.016
		M	0.571	0.145	0.814	0.075	0.852	0.014
<b>Oregon</b>								
COA	{ $\varphi$ ((S1+S2+A)+TT) $p(BO+s)$ }	F	0.742	0.072	0.864	0.031	0.859	0.009
		M	0.748	0.071	0.868	0.030	0.863	0.008

HJA	$\{\varphi((S1, S2=A)+t) \ p(s+t)\}$	F	0.717	0.084	0.830	0.042	0.865	0.010
		M	0.717	0.084	0.830	0.042	0.864	0.010
TYE	$\{\varphi((S1, S2=A)+TT) \ p(R+s)\}$	F	0.761	0.043	0.864	0.020	0.856	0.008
		M	0.762	0.042	0.865	0.019	0.857	0.008
KLA	$\{\varphi((S1, S2=A)+t) \ p(BO+s)\}$	F	0.788	0.040	0.858	0.020	0.848	0.008
		M	0.786	0.040	0.857	0.020	0.847	0.008
CAS	$\{\varphi((S1, S2=A)+TT) \ p(t)\}$	F	0.692	0.069	0.733	0.053	0.851	0.010
		M	0.697	0.069	0.737	0.053	0.853	0.010
California								
NWC	$\{\varphi((S1= S2, A)+T) \ p(meth+s)\}$	F	0.774	0.031	0.784	0.031	0.844	0.009
		M	0.776	0.031	0.787	0.031	0.846	0.009
HUP	$\{\varphi((S1, S2=A)) \ p(EW+Effort)\}$	F	0.758	0.087	0.838	0.038	0.854	0.014
		M	0.762	0.086	0.840	0.037	0.857	0.013
GDR	$\{\varphi((S1, S2=A)+BO) \ p(s)\}$	F	0.767	0.044	0.852	0.015	0.853	0.007
		M	0.764	0.045	0.850	0.015	0.851	0.007

<sup>a</sup> Model notation indicates structure for additive (+) or interactive (\*) effects of sex (s), time (t), linear time trend (T), quadratic time trend (TT), 2004 change-point (CP), reproduction (R), proportion of territories with Barred Owl detections (BO), age-class (S1, S2, A), east-west binomial subdivision of study area (EW), survey method (meth), or differential survey effort in particular years (Effort). An “=” sign means that age classes were combined, and a “,” indicates they were modeled separately.

<sup>b</sup> Age classes (S1, S2, A) indicate owls that were 1, 2, or  $\geq 3$  years old. Average survival is the arithmetic mean of model-averaged annual survival estimates. Standard errors were calculated using the delta method.